

Directions: Solve each equation using a common base.

1. $9^{3x-7} = 9^{5-x}$

2. $2^{w+4} \cdot 2^{4w+6} = 2^{2w+1}$

3. $8^{6y+4} = 64$

4. $\frac{1}{5} = 5^{2c+3}$

5. $\frac{1}{27} = 3^{4m-1}$

6. $216 = 6^{2r-11}$

7. $2^{3k-1} \cdot 2^{5k-7} = 16$

8. $4^n \cdot 4^{2n-9} = 64$

<p>9. $8^{x+2} = 4$</p>	<p>10. $125 = 25^{2h+1}$</p>
<p>11. $49^{p+1} = 343^{2p}$</p>	<p>12. $16^{r-2} = 64^{r+2}$</p>
<p>13. $27^{3n} = 81^{2n+1}$</p>	<p>14. $\left(\frac{1}{4}\right)^{2x} = 32^{4x-2}$</p>
<p>15. $16 \cdot 2^{6m} = 2^{3m-8}$</p>	<p>16. $\left(\frac{1}{9}\right)^a \cdot \left(\frac{1}{3}\right)^a = 3^{16-a}$</p>
<p>17. $256^y \cdot 16^{y-1} = 4^{2y-22}$</p>	<p>18. $36^{n-3} \cdot 216^n = 216^{2n+1}$</p>